

Successful endoscopic ultrasound-guided fine-needle biopsy of a recurrent paraganglioma using a forward-viewing echoendoscope in a patient who had undergone the Whipple procedure

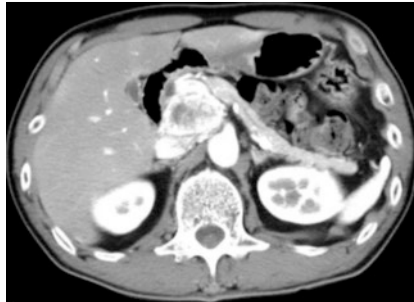
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Endoscopic ultrasound-guided fine-needle biopsy (EUS-FNB) is useful for the diagnosis of retroperitoneal lesions and pancreatic diseases. However, the usefulness of EUS-FNB for tissue acquisition from retroperitoneal lesions in patients with surgically altered anatomy has not been established [1–5]. Herein, we report successful tissue acquisition from a recurrent lymph node lesion of a retroperitoneal paraganglioma by EUS-FNB using a forward-viewing echoendoscope (FV-EUS) in a patient who had undergone the Whipple procedure.

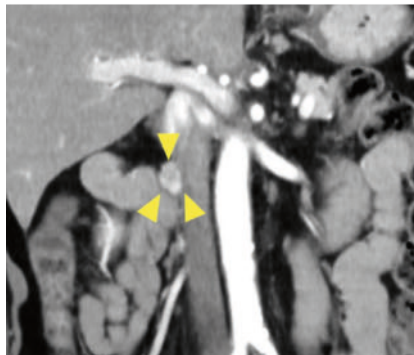
A 60-year-old man underwent the Whipple procedure for a retroperitoneal paraganglioma adjacent to the head of the pancreas (► Fig. 1). Follow-up computed tomography 2.5 years after surgery revealed a 15-mm swelling of the lymph node on the right side of the inferior vena cava (► Fig. 2). The lesion was located near the afferent loop, and we expected that it could be visualized using an FV-EUS (TGF-UC260; Olympus, Tokyo, Japan).

To insert the FV-EUS into the afferent loop safely, a short-type single-balloon enteroscope (SIF-H290; Olympus) was first inserted into the hepaticojejunostomy anastomosis (► Fig. 3), and a guidewire was placed. Then, under wire guidance, the FV-EUS was inserted up into the afferent loop, and the target lesion was visualized. EUS-FNB was performed transjejunally using a 22-gauge FNB needle (► Fig. 4). The histopathological diagnosis was consistent with lymph node recurrence of the retroperitoneal paraganglioma (► Fig. 5). Finally, open retroperitoneal tumor resection was performed, and complete resection was achieved (► Video 1).

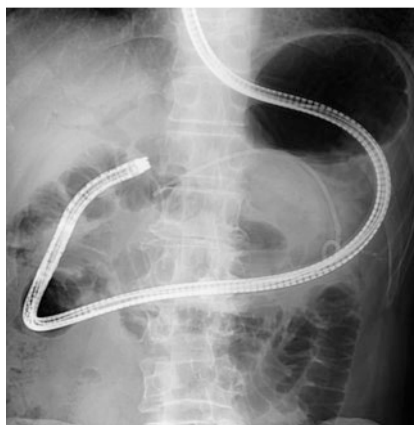
This case demonstrates that EUS-FNB using an FV-EUS and assisted by balloon enteroscope insertion is a safe and effective method for tissue acquisition in patients with surgically altered anatomy,



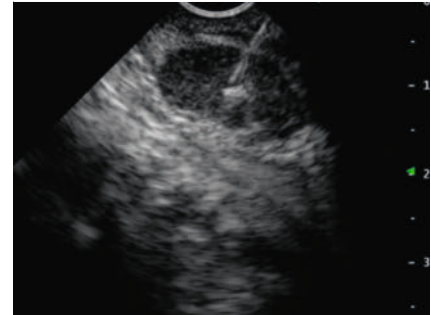
► Fig. 1 Computed tomography image of a retroperitoneal paraganglioma. The tumor was located adjacent to the head of the pancreas.



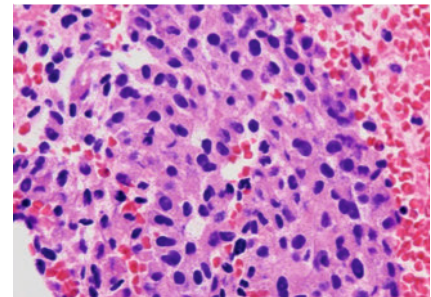
► Fig. 2 Computed tomography image of a recurrent lymph node lesion (arrowheads) of the retroperitoneal paraganglioma.



► Fig. 3 A balloon enteroscope was inserted into the afferent loop.



► Fig. 4 Endoscopic ultrasound-guided fine-needle biopsy was performed using a 22-gauge needle.



► Fig. 5 The pathological specimen obtained by endoscopic ultrasound-guided fine-needle biopsy.



► Video 1 Successful endoscopic ultrasound-guided fine-needle biopsy of a recurrent paraganglioma using a forward-viewing echoendoscope in a patient who had undergone the Whipple procedure.

and can prevent adverse events, such as gastrointestinal perforation.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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